

REMARKS

This paper is filed in response to the Final Office Action mailed on July 23, 2009 (“Office Action”). As this paper is filed within the 3-month statutory period, no extension fees are believed to be due. Claims 1, 3, 5 and 13-20 are pending in the application. Claims 2, 4 and 6-12 have been cancelled without prejudice or disclaimer. Claims 15-20 were previously presented.

Declaration

In the Office Action, the Examiner indicated that although comparisons shown in the declaration under 37 CFR 1.132 filed 5/1/209 are persuasive as to the non-obviousness with respect to the particular compounds for activities compared, this comparison is not persuasive as to the entire genus of compounds claimed because there is an obvious unpredictability in the art with respect to the activities of the compounds as demonstrated by the declaration filed 9/24/2008.

However, the applicant disagrees with the Examiner’s comments, because the application was confirmed by the student’s – test statistical analysis that there is a statistically significant difference between results shown in the declaration filed 9/24/2008, that is, between the inhibition rate of “Compound 37” of the present application and that of “Compound 3-19” of ‘516 patent ($p=0.008337<0.01$). Accordingly, the applicant submits that the declaration filed 9/24/2008 does not demonstrate an obvious unpredictability in the art with respect to the activities of the compounds, but demonstrate an unpredictable effects exhibited by the present invention. Thus, the applicant submits that a non-obviousness with respect to the entire genus of compounds claimed has been sufficiently demonstrated by the declarations under 37 CFR 1.132 filed 5/1/2009 and 9/24/2008.

Claim Objections

The Examiner has withdrawn the objection to claims 2, 6, 13 and 14 as the claims are now in proper dependent form.

Claim Rejections Under 35 U.S.C. § 112

Claims 1-3, 5, 6 and 14 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as his invention.

Applicants respectfully traverse. However, in order to expedite and compact prosecution, Applicants have amended the claims as per the Examiner's recommendations. Specifically, the Examiner alleges that Claims 1 and 5 continue to use improper language, specifically in the definition of "R1" as "substituted". In response, Applicants have amended claims 1 and 5 by deleting the language of "or substituted" from the definition in "R1". Accordingly, Applicants submit that the rejection has been overcome.

The Examiner has recommended including the language of "the phenyl group of formula (1)" in Claim 3. In response, Applicants have amended claims 3 and 13 as recommended by the Examiner. No new matter has been added by virtue of these amendments and entry is respectfully requested.

In view thereof, Applicants respectfully request reconsideration and withdrawal of the instant rejection.

Claim Rejections Under 35 U.S.C. § 103

Claims 1-3, 5, 6, 13, and 14 were rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,342,516 ('516) in view of Patani et al. (Chem. Rev., 1996, Vol. 96, No. 8, P. 3147-3176).

Applicants respectfully traverse.

Applicants respectfully disagree with the Examiner's assertions. The Examiner asserts the following on page 6 of the Office Action:

The '516 reference teaches a genus of compounds as a pharmaceutical agent for preventing peroxidized lipid production (col. 2, line 25) and also have antioxidation activity (col. 66, line 4).

The Examiner also asserts on page 10 of the Office Action:

Patani et al. teaches on pages 3152-54 the bioisosteric replacement of a hydroxyl group with an amino group while retaining activity. The reference teaches the application generally and also provides several specific examples in related contexts.

The Examiner further asserts on pages 10-11 of the Office Action:

2. Ascertaining the differences between the prior art and the claims at issue.

The difference between the '516 compound and the claims is a hydroxyl instead of an amino substitution at the "G2" position.

3. Resolving the level of ordinary skill in the pertinent art.

One of ordinary skill in the art would be well versed in the well-known method of bioisosteric replacement to optimize pharmaceutical compounds. In addition, modifying the G2-position substituent (*sic*) is a routine procedure well within the technical grasp of those of ordinary skill in the art.

4. Considering objective evidence present in the application.

The instant claims are encompassed by the claims of the '516 patent. One of ordinary skill in the art, upon reading the teaching of '516 and the specific teaching of the "G2" position as NH₂ in claim 2 would immediately recognize through structural similarity and specifically the teaching of Patani that the '516 compound would have the desired antioxidant activity if the hydroxyl group were modified to an amino group.

Applicants respectfully disagree with the Examiner's assertions. The '516 neither, taught, suggested or disclosed the substitutions taught by Applicants and Patani did not provide the necessary motivation for one of skill in the art to substitute the G2 position with other substitutions as asserted by the Examiner. Indeed, the '516 patent describes "the excellent effects of the compounds according to the present invention...." thereby teaching away from making any substitutions to the compounds. See, for example, column 62, lines 54-55; column 65, lines 61 -67 through to column 66, lines 1-7. In contrast to the '516 compounds, Applicants have demonstrated

unexpected effects which are exhibited by the compounds of the present invention as shown in the submitted declarations under 37 CFR 1.132 filed 5/1/2009 and 9/24/2008, as described above. The properties of Applicants' compounds, not only have unexpectedly high inhibition rates of *ex vivo* lipid peroxide action, but these compounds can cross the blood brain barrier. The '516 patent, in view of Patani, does not provide any compound having the instant substitutions with the properties of the instant compounds. Indeed, Patani fails to motivate any one of skill in the art to take any of the compounds of the '516 patent and substitute them with the instant G2 substitutions. As such, the instant compounds cannot be considered equivalent and therefore the '516 patent in view of Patani fail as 35 U.S.C. § 103 references. Accordingly, Applicants submits, that the present invention is not rendered obvious by the '516 patent in view of Patani et al.

In view thereof, Applicants respectfully request reconsideration and withdrawal of the instant rejection.

CONCLUSION

As described above, since all of the rejections have been overcome, allowance of all claims is respectfully requested. The applicant submits that the application is in condition for allowance.

If there are any remaining issues or the Examiner believes that a telephone conversation with the undersigned would be helpful in expediting prosecution of this application, the Examiner is invited to call the undersigned at telephone number shown below.

This Response is being timely filed within the shortened statutory period and as such no fees are believed to be due. Although, Applicants believe that no extensions of time are required with submission of this paper, Applicants request that this submission also be considered as a petition for any extensions of time if deemed necessary. The Commissioner for Patents and Trademarks is hereby authorized to charge the amount due for any retroactive extensions of time and any

deficiency in any fees due with the filing of this paper or credit any overpayment in any fees paid on the filing or during prosecution of this application to Deposit Account No. 04-0100.

Dated: October 19, 2009

Respectfully submitted,

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